

REMARKS

This amendment responds to the Office Action mailed on February 2, 2004, in the present application. Claims 1-8, 27, and 28 are pending. Claims 6 and 9-26 are canceled and Claims 29-32 are withdrawn. Claims 1-3, 5, 27, and 28 stand rejected as obvious over Bean (U.S. Patent No. 5,964,004) in view of Minton (U.S. Patent No. 5,457,841). Claims 4 and 6-8 were found to contain patentable subject matter. The applicants thank the Examiner for her review of the present application.

Claims 1-8

The Examiner has indicated that Claims 4 and 6-8 would be allowable if rewritten in independent form, including all of the limitations of the base claim. Claim 1 has been amended to include the limitation from Claim 6, and is therefore believed to be in condition for allowance, and Claim 6 is canceled. Claims 7 and 8 are amended to depend from Claim 1, rather than Claim 6. Claims 1-5, 7, and 8 are therefore believed to be in condition for allowance.

A Catheter Extending Over Drive Shaft and Having a Fluted Distal End

Claim 27 recites, in relevant part, "a catheter extending substantially over the length of the flexible drive shaft, the catheter defining a lumen having a first diameter."

A catheter is defined as "a slender, hollow tube . . . inserted into a body passage, vessel, or cavity for passing fluids, making examinations, etc."¹ This conventional definition is fully consistent with the present application. For example, the preamble to Claim 28 recites "An atherectomy device for ablating an occlusion in a patient's vessel . . ." At page 2, line 4, *et seq.*, the present application describes the atherectomy procedure and states, "To perform the atherectomy procedure, a guide catheter is inserted into the patient, frequently at the femoral

¹ *Webster's New World College Dictionary*, Third Edition (1996)

artery, and advanced through the patient's vasculature until the distal end of the guide catheter is located near a target occlusion." The Summary of the Invention begins with "The invention disclosed herein is an atherectomy device utilizing a compressible burr, whereby the compressible burr can be advanced to and withdrawn from the site of an occlusion using a guide catheter having a diameter that is smaller than the operational diameter of the burr." Also, in the detailed description of the preferred embodiment, at page 6, line 16, *et seq.*, the present application states, "The burr 100 can then be inserted to the location of the occlusion that is to be treated using a guide catheter 80 having a diameter that is smaller than the diameter of the unfolded burr 100."

It is respectfully asserted that none of the prior art cited by the Examiner discloses a catheter. In particular, Bean discloses a device for cleaning medical tubes utilizing a support rod (20). There is no teaching or suggestion that the support rod would have a catheter extending over its length and, indeed, there would not seem to be any reason or motivation to use such an arrangement. Minton discloses a cleaning pig for a pipe, and again does not teach or suggest any kind of catheter.

Because Claims 27 and 28 recite structure that is not found in any of the cited art, it is believed that the claims are in condition for allowance.

To even further clarify what is claimed, however, Claim 27 is herein amended to recite that the catheter includes a larger-diameter fluted distal end. The fluted catheter is disclosed throughout the present application. For example, at page 6, line 14, *et seq.*, the application states, "The guide catheter 80 may include an expanded or fluted portion 85 at its distal end to accommodate the burr 100 with the folded flexible disks 110." Also, see Figures 1B and 2A.

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Because Claims 27 and 28, as amended, include limitations directed to a catheter and, in particular, to a catheter having a fluted distal end, these claims are believed to be patentably distinct over the prior art and in condition for allowance.

New Claims 33-37

A new independent Claim 33 has been added. Claim 33 is similar to the originally submitted Claim 1, which recited in relevant part, "the catheter adapted to receive the at least one flexible annular disk in a folded configuration." It is believed that the flexible annular disk being received in a folded configuration is novel, and not found in any of the cited prior art. Claim 33, however, more particularly defines the "folded orientation" of the of the annular flexible disks, reciting in relevant part, "the annular disk being deformable between a planar orientation wherein the annular disk is substantially flat and a folded orientation wherein a portion of the annular disk is rotated about ninety degrees from the planar orientation."

This language is believed to more precisely define and claim the folded orientation of the flexible disks. Clearly, none of the cited prior art discloses a flexible disk that is deformable between a substantially flat orientation and a folded orientation wherein a portion of the disk is rotated 90°. Claim 33 is fully supported by the present application—for example, Figure 1A shows the disks (115) in a substantially flat, unfolded orientation, and Figure 2B shows the disks folded, wherein a portion of the flexible disks are rotated 90°.

Claim 33 is therefore believed to be in condition for allowance. New claims 34-37 depend from Claim 33 and are therefore believed to also be in condition for allowance.

CONCLUSION

The Examiner has found Claim 6 to be patentable if rewritten in independent form. Claim 1 is herein amended to include the limitation from dependent Claim 6, and is therefore

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believed to be in condition for allowance. Claim 6 is canceled, and the remaining dependent Claims 2-5, 7, and 8 are believed to be in condition for allowance.

Claim 27 recites a catheter substantially over the length of the drive shaft, which is not disclosed in any of the cited art. In addition, Claim 27 is herein amended to recite that the catheter includes a fluted distal end. Claim 27, and its dependent Claim 28, are therefore believed to be in condition for allowance.

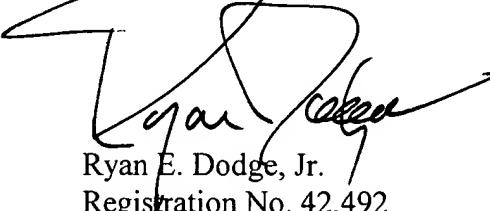
New independent Claim 33, and dependent Claims 34-37 are added. Claim 33 is similar to the original Claim 1, with the folded orientation of the flexible disks more clearly defined. Claims 33-37 are believed to be distinguishable over the prior art and in condition for allowance.

All of the amendments proposed herein are believed to be fully disclosed in the specification.

Entry of the amendments and a favorable disposition are respectfully requested. If the Examiner has any further questions regarding this matter, she is encouraged to call the undersigned directly.

Respectfully submitted,

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